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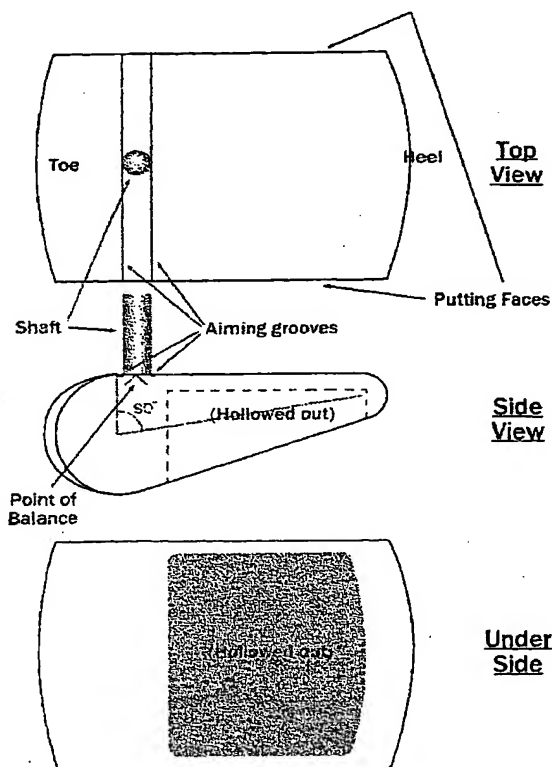
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- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AU, CA, JP, KR, NZ, SG, ZA, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR)
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[Continued on next page]

(54) Title: GOLF PUTTER



(57) Abstract: This is a Putter which, when suspended from the end of the shaft, hangs at right angles to level ground and is balanced to act like a true pendulum when swung at right angles to the putting face(s). With the shaft inserted, unusually, at the toe end of the head where most of the mass is concentrated, a small but effective hitting area (the sweet spot) with minimal inadvertent contact with the ground is achieved. With the top surface of the head being at right angles to the shaft and given the width of the head generous aiming lines presented flat to the golfer are obtained for both right- or left-handed use. The variable length shaft allows for multi-use.

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— with amended claims

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## GOLF PUTTER

1.

For some considerable time golfers have struggled to achieve some measure of consistency and success in the difficult art of 'putting'. Many different putters have been produced but, by and large, the problems lie not only with the golfer but with the way the conventional putter is used. This invention is an attempt to overcome the major physical problems facing golfers and to provide them with a novel alternative method, albeit within the Royal and Ancient Rules of Golf.

2.

The problems with conventional putting are :-

- (a) the difficulty of achieving a 'straight' backswing and 'straight' follow through. Although the golf professional will teach using the putter like a 'pendulum' this can never be properly achieved because of the necessary  $10^\circ$  angle between shaft and head (R. and A. Rule book Appendix II I.d.(i) ). With the best will in the world the swing will want to form an arc around the body thus a 'straight' backswing and follow through has to be 'manufactured' by the golfer.
- (b) the difficulty of achieving an accurate 'line of sight'. The eyes see a line to the aiming point which is different to that of the ball to the aiming point (parallax error). The difficulty is compounded by the fact that the eyes are not facing the line of sight required.
- (c) the difficulty of 'putting' across the body. Professional golfers (right handed) do not like left to right putts and vice versa.

3.

This invention addresses all these problems and provides an alternative method of 'putting'.

4.

The Putter, when suspended from the end of the shaft, has been designed to hang vertically. The shaft has been inserted in the head at the point of balance and therefore hangs at right angles to level ground. When swung the Putter will swing like a true pendulum and because of the unusual positioning of the shaft (at the 'toe' end of the head) the heel will be well clear of the ground. The nearest point of contact to the ground will be almost directly under the shaft, thus, on making a stroke with the shaft vertical (croquet style Page 7 Fig 3) inadvertent contact with the ground will be minimal. Reference to Page 8 Fig 4 will show that the head is 'hollowed' out resulting in most of the mass of the Putter being concentrated directly under the shaft almost in the form of a cylinder. A solid strike of the ball at the 'sweet spot' (the point of contact below the shaft) results and because of the true pendulum action and the method of use (see Page 7 Fig 3) the three problems outlined in para 2 a.b.c. are overcome.

5.

The head of the putter is so designed that it has two identical faces - thus it can be used right- or left-handed. Because of its width (Page 8 Fig 4) generous aiming lines can be etched on the top surface which as can be seen is at right angles to the shaft thus

presenting the golfer with a perfect flat face when putting 'croquet' style.

6.

The putter will be provided with a conventional length putter shaft but will have the facility of being lengthened by means of a screwed-in extension (see Fig 2) thus it can be used in several ways, notably conventionally (see Fig 1) or in the way shown in Figure 3. (croquet style). It can also be used in the manner known as the 'broomhandle', with the golfer standing astride the line of sight and the shaft almost directly under the chin.

7.

- (a) The putter head will be made of metal
- (b) The shaft will be made of steel and the grips (including the extension) of fully rounded material
- (c) To achieve a satisfactory 'pendulum' action the putter is heavy - almost twice the weight of conventional putters (approx 900gms)

8.

- (a) Figure 1 shows the general view of the putter fitted with a conventional shaft
- (b) Figure 2 shows how the screwed-in extension to the shaft will be fitted
- (c) Figure 3 shows how the putter is used with the extension fitted. It will be observed that by making use of the putters' true pendulum action the problems outlined in Para 2 are overcome. There is no 'arc' around the body (Para 2(a)). The 'line of sight' is directly over the ball (Para 2(b)) and the problem of left to right putts does not arise (Para 2(c))
- (d) Figure 4 gives detail of the head of the putter

**CLAIMS****1.**

This is a Putter which, when suspended from the end of the shaft, hangs at right angles to level ground and is balanced to act like a true pendulum when swung at right angles to the putting face(s). With the shaft inserted, unusually, at the toe end of the head where most of the mass is concentrated, a small but effective hitting area (the sweet spot) presented with minimal inadvertent contact with the ground (Page 1 Para4) is achieved. With the top surface of the head being at right angles to the shaft and given the width of the head (Page 8 Fig 4) generous aiming lines presented flat to the golfer are obtained for both right- or left-handed use. The variable length shaft allows for multi-use and it is claimed that this combination of factors represent a novel departure from the accepted methods of putting and is therefore original.

**AMENDED CLAIMS**

[received by the International Bureau on 7 November 2001 (07.11.01);  
original claim 1 replaced by new claims 1-4 (1 page)]

1. A golf putter wherein a straight shaft is inserted towards one end of the head, the head having its centre of mass concentrated beneath the shaft insertion point so that the putter swings at right angles to the putting face like a true pendulum when suspended vertically, the top surface of the head being at right angles to the shaft at least at the shaft insertion point, the head being shaped so that the greatest depth of the head is immediately below the shaft insertion point and the head having two identical flat striking surfaces to allow for use by right - or left-handed players, wherein also the putter is provided with an extension to the shaft to enable the putter to be converted from use in a conventional putting style to use in a broomhandle or pendulum style of putting.

2. A putter as claimed in claim 1 wherein the top surface of the head is wide and aiming marks are etched into said top surface.

3. A putter as claimed in claims 1 or 2 wherein at least part of the head which is not directly under the shaft is hollowed out.

4. A putter as claimed in any of claims 1 to 3 wherein the weight of the putter is nearly twice that of a conventional putter.

AMENDED SHEET (ARTICLE 19)

Figure 1



Figure 2

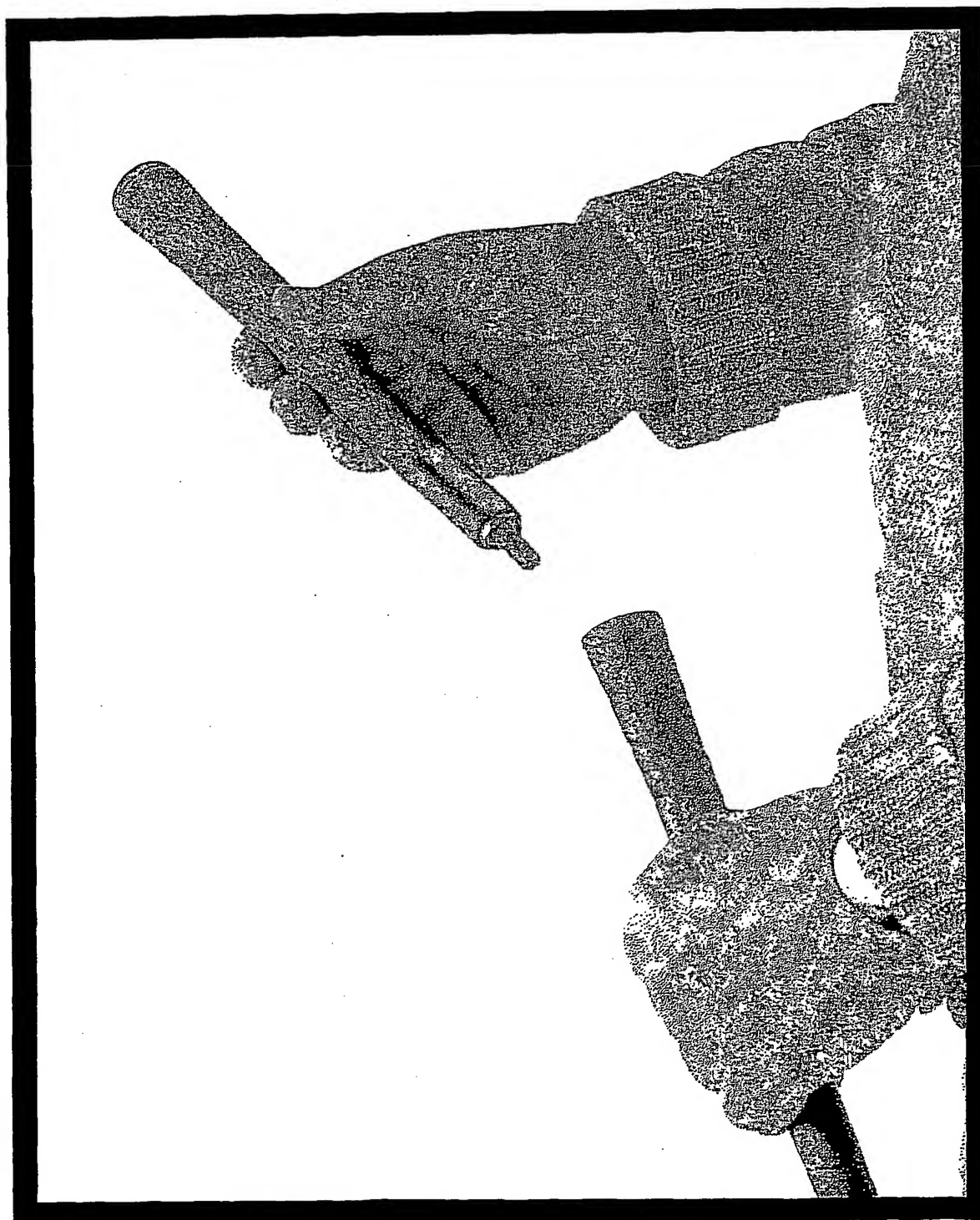
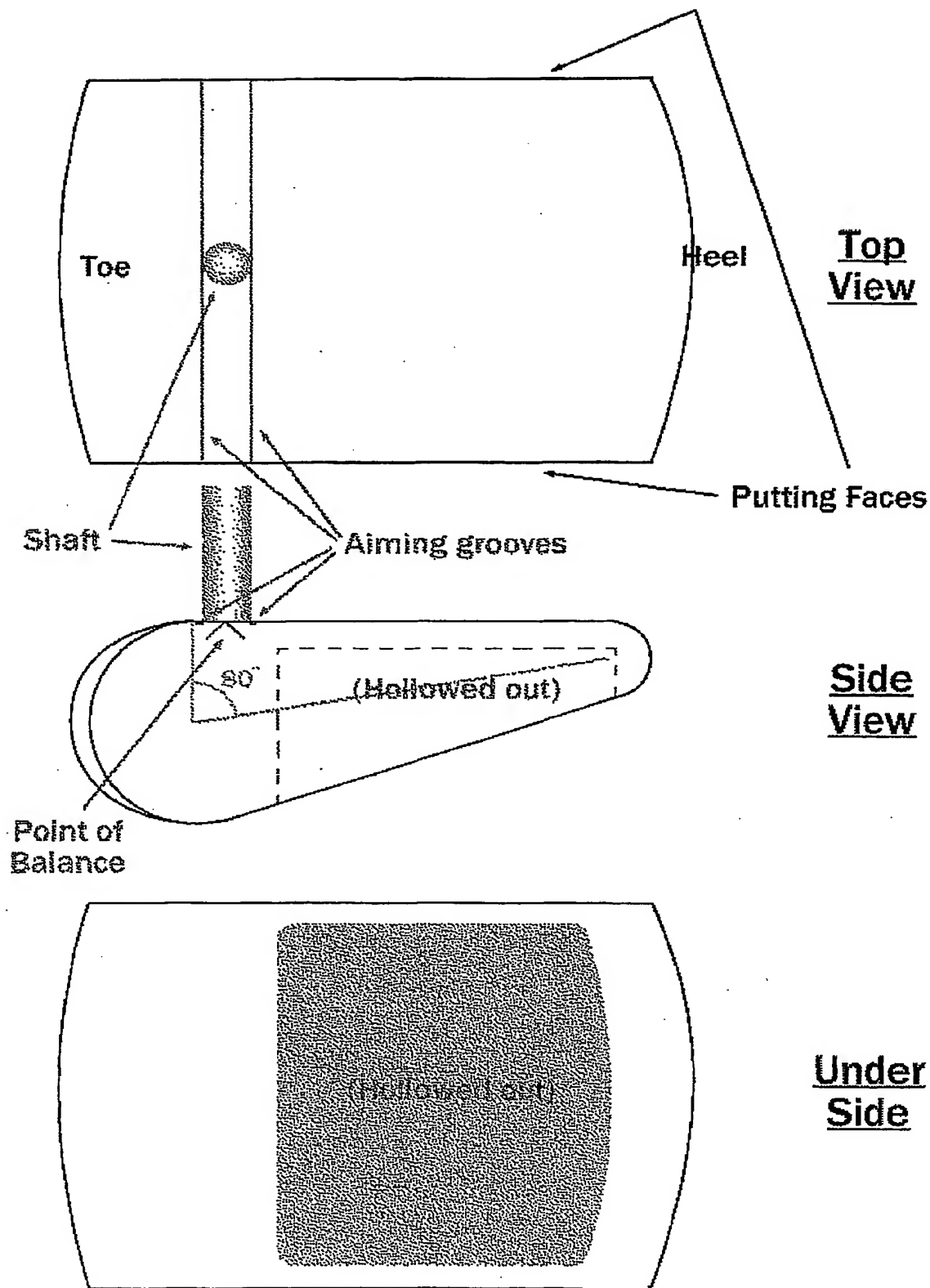




Figure 3



Figure 4



# INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 A63B53/00 A63B53/04 A63B53/16

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A63B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3 096 982 A (BASSIN) 9 July 1963 (1963-07-09) column 4, line 12 - line 48; figures 1-6	1
Y	US 5 544 879 A (COLLINS) 13 August 1996 (1996-08-13) the whole document	1
A	PATENT ABSTRACTS OF JAPAN vol. 016, no. 180 (C-0935), 30 April 1992 (1992-04-30) -& JP 04 022373 A (KIMIO MARUYAMA), 27 January 1992 (1992-01-27) abstract	1
A	US 5 273 282 A (CANNON) 28 December 1993 (1993-12-28) the whole document	1

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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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International Application No  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 255 919 A (JOHNSON) 26 October 1993 (1993-10-26) the whole document	1
A	AU 498 835 B (DALTON) 29 March 1979 (1979-03-29) page 4, line 14 -page 6, line 18; figures 1-3	1
A	US 4 411 430 A (DIAN) 25 October 1983 (1983-10-25) the whole document	1
A	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 10, 31 October 1997 (1997-10-31) -& JP 09 164229 A (MARUMAN GOLF CORP), 24 June 1997 (1997-06-24) abstract	1
A	WO 98 08576 A (KENNEDY ET AL.) 5 March 1998 (1998-03-05) the whole document	1
A	US 5 649 870 A (HARRISON) 22 July 1997 (1997-07-22) column 4, line 7 - line 41; figures 4A-4C	1
A	US 5 961 400 A (BROOM) 5 October 1999 (1999-10-05)	

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 01/02220

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3096982	A	09-07-1963	NONE	
US 5544879	A	13-08-1996	GB 2302033 A US 6203446 B1 US 5785608 A	08-01-1997 20-03-2001 28-07-1998
JP 04022373	A	27-01-1992	NONE	
US 5273282	A	28-12-1993	NONE	
US 5255919	A	26-10-1993	AU 642479 B2 AU 7351191 A CA 2047366 A1 GB 2247178 A JP 4279181 A US 5116054 A	21-10-1993 27-02-1992 22-02-1992 26-02-1992 05-10-1992 26-05-1992
AU 498835	B	29-03-1979	AU 498835 B2	29-03-1979
US 4411430	A	25-10-1983	US 4324404 A	13-04-1982
JP 09164229	A	24-06-1997	NONE	
WO 9808576	A	05-03-1998	AU 3842797 A WO 9808576 A1	19-03-1998 05-03-1998
US 5649870	A	22-07-1997	NONE	
US 5961400	A	05-10-1999	NONE	

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